



GOVERNMENT OF KARNATAKA

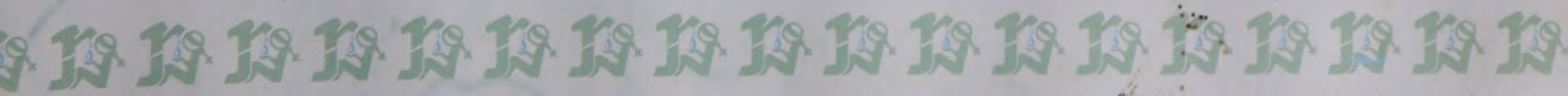
# SCHOOL SANITATION AND HYGIENE EDUCATION **OPERATIONAL MANUAL**



**Water and Sanitation lead to Health and Happiness!**

**KARNATAKA RURAL WATER SUPPLY AND SANITATION AGENCY**

RURAL DEVELOPMENT & PANCHAYAT RAJ DEPT.



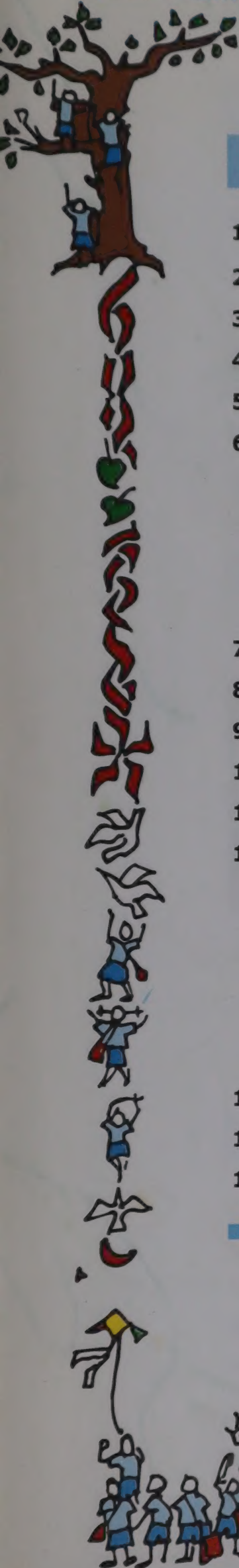


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## 1. INTRODUCTION

Promoting environmental sanitation & hygiene education in Primary & High Schools of Karnataka.

Intervention of School Sanitation results in motivating the school children to take on the message of use of latrine in schools to their households and the situation with regard to individual household sanitation coverage considerably improves in the villages where School Sanitation concept is implemented.

To this effect there will be significant reduction in occurrence of water- borne diseases.

### School Sanitation



← BEFORE

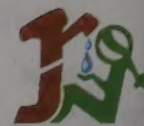
AFTER



## 2. WHY SCHOOL SANITATION?

Schools are ideal institutions for health promotion of children. The hygiene behaviour of the entire community can be influenced through children. Schools can educate children towards healthy lifestyle, help to address their immediate health needs and provide them with healthy surroundings which serve as a community model for environmental care.





Schools should be adequately equipped with water, sanitation & drainage facilities. Proper care should be taken for safe disposal of solid waste in the vicinity of the school. Without emphasis on basic hygiene, children may become victims of various infections.

Many schools don't have toilet facilities, often because of lack of upkeep and poor water supply. Inadequate toilets and water supply facilities in the school have significant implications on children's health and attendance particularly of girl child. School sanitation and hygiene seriously affect a girl's chances of obtaining good education.

For many children, the school may be their first experience with working toilets, running water, well ventilated classrooms and clean surroundings. This can have a powerful impact on their vision of what is possible in the world and even in their own communities. It is important that schools expose children to the benefits of hygienic living & give the whole community a standard to aspire to. School children at tender age develop lifelong habits, and schools can serve as important institutions to provide material resource and information for promoting healthy lifestyles. Information about daily hygiene, nutrition, and environmental care are important from the earliest school days. In the SSHE Project, School Development & Monitoring Committees (SDMC's) will guide school headmasters / teachers to:



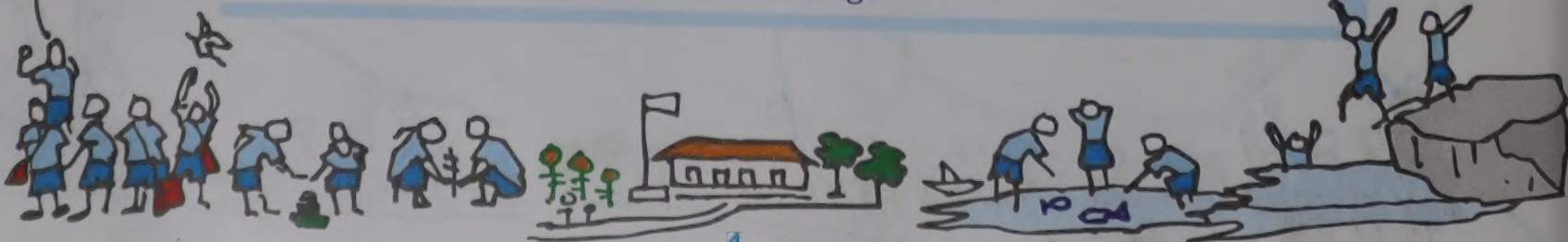
*No matter how well school facilities are designed and built, they will not function smoothly if they are not well managed and maintained.*

*Dilapidated, run-down facilities are demoralising for both students & teachers.*

*If the school develops an active relationship with parents and community, the community may play a vital role in maintenance of these infrastructures.*

*Simple tasks like repainting can be done in participatory methods involving community and children.*

*A well-kept school can be a resource and a source of pride for the whole village.*







School children at tender age develop lifelong habits, and schools can serve as important institutions to provide material resource and information for promoting healthy lifestyles. Information about daily hygiene, nutrition, and environmental care are important from the earliest school days. In the SSHE Project, School Development & Monitoring Committees (SDMC's) will guide school headmasters / teachers to:

- Promote the most effective use of the land available at school for unstructured play, games and organised sports.
- Allow vegetation to grow freely, support gardening, composting in school yards if sufficient space is available.
- Ensure children's active participation in the decision making, daily management, and monitoring of the school environment.



### 3. GOALS

The goals of the project are :

- TO CREATE AWARENESS AND BRING ABOUT BEHAVIORAL CHANGE AMONG SCHOOL CHILDREN, THROUGH THEM, AMONG PARENTS & THE COMMUNITY
- TO CONTRIBUTE TO THE REALISATION OF CHILD RIGHTS IN KARNATAKA.







## “TEACHER TO CHILD

## CHILD TO PARENT TO -COMMUNITY”

(TCCPC) approach

### 4. OBJECTIVES :

#### □ The general objectives of the project are :

- ❖ To bring about positive attitudinal and behavioural changes in children in sanitation & hygiene habits, hand-washing practices and in turn in their families and communities.
- ❖ To make " hygiene education and environmental sanitation " a people's movement through mobilising the network of students, teachers, and Panchayat Raj Institutions to create awareness, generate demand and inculcate personal hygiene practices among children and through them, among their parents / families, and in turn, in the communities as a whole.







- ❖ To demonstrate replicable models for hygiene education, water supply and environmental sanitation in rural primary schools.
- ❖ To create awareness for conservation and proper utilisation of water resources.

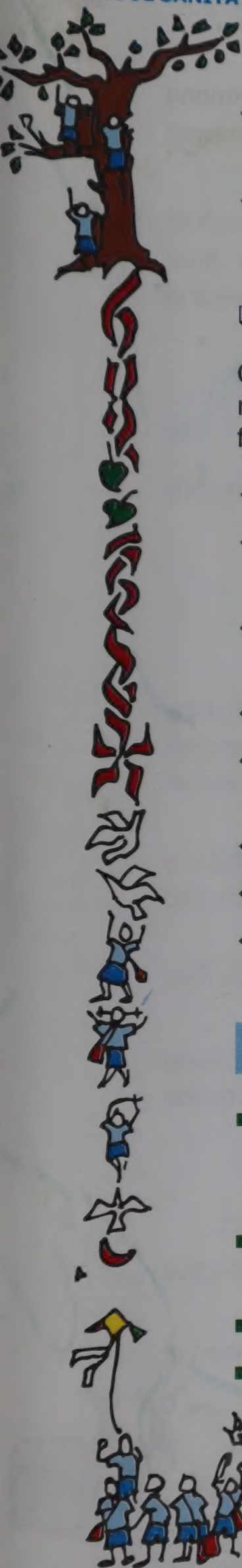
❑ **Activities to achieve objectives of the project are :**

Construct safe drinking water and sanitation facilities in schools that have non-existent or insufficient water supply, sanitation and hand-washing facilities ;

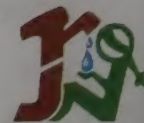
- ❖ Rehabilitation of existing water supply and sanitation facilities.
- ❖ To provide toilets or latrines that are adapted to the needs of children in general, girls, and the physically challenged in particular.
- ❖ To conduct motivation campaigns the school teachers and children to take up sanitation programmes on priority.
- ❖ IEC activities for awareness creation.
- ❖ To conduct capacity building activities identified by the state level committees.
- ❖ Formation of school cabinets
- ❖ Study tours and exchange visits to the successful SSHE projects.
- ❖ Empowerment of SDMC's & VWSC's to strengthen SSHE activities at village level for sustainability.

## 5. HYGIENE EDUCATION STRATEGY :

- To conduct Baseline surveys, to evaluate present infrastructure and levels of awareness of school children and teachers on Water and Sanitation.
- Assessment of demand for school sanitation and preparation of social level plans for implementation.
- Mobilisation of contribution from the community through SDMC.
- Development of implementation plan and physical construction.







- Promote better understanding of school sanitation, approach among officers at the block level and the role to be played by their department through orientation sessions or workshops.
- Regular follow up on quality of latrine constructions etc., at the school level by school teachers/children. Standardised designs and their details including unit costs and perspective views will be laminated and displayed in the schools to facilitate this.

## 6. INSTITUTIONAL ARRANGEMENT :

State Water & Sanitation Mission to School Development & Monitoring Committee (SWSM to SDMC).

### THE PARTNERS

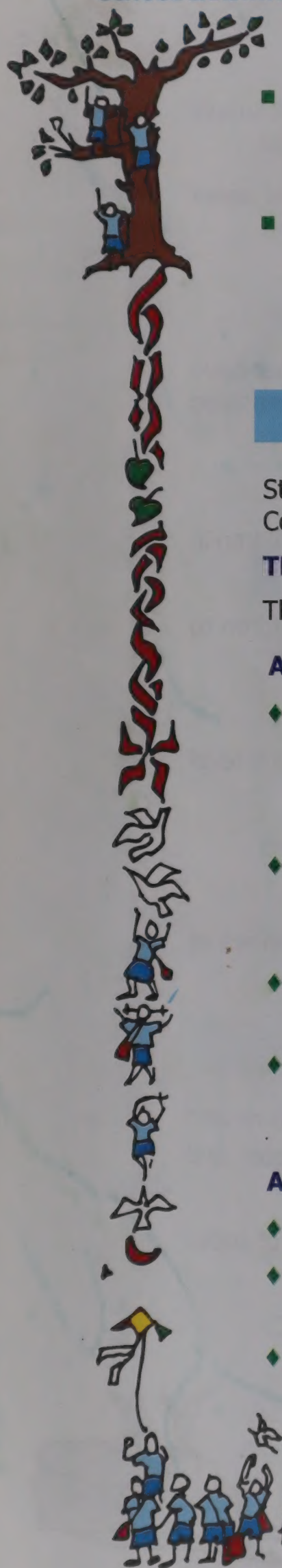
The project partners in this initiative will be:

#### AT STATE LEVEL:

- ◆ State Water Supply and Sanitation Mission (SWSM) / KRWSSA shall be the nodal agency and will formulate policy and guidelines for project implementation and provides linkage between GOI, GOK and financial institutions.
- ◆ Department of Health and Family Welfare services will help KRWSSA in project implementation by providing necessary inputs in health and hygiene promotion issues.
- ◆ Department of Education will provide necessary coordination with field levels for effective implementation of the project.
- ◆ Department of Women & Child Welfare will coordinate with field level functionaries for construction of latrines at Anganawadis and promotion of sanitation habits at village level through Anganawadi workers.

#### AT DISTRICT LEVEL:

- ◆ Zilla Panchayath Adyaksha will be honorary president of the project.
- ◆ CEO, ZP is executive head and shall be responsible for effective implementation of the project and supervision.
- ◆ EE (ZPED) will provide necessary technical advice in implementation of physical components of the project.







- ◆ DDPIs, AD W & CW (ICDS), DHO, DCF (Social Forestry), District Horticultural Officer and District Information Officer will help and coordinate with the CEO in project implementation and monitoring.
- ◆ Project shall be monitored under the overall guidance of the District Level Co-ordination Committee headed by the CEO, ZP.
- ◆ Dist Co-ordinator, under guidance of CEO, ZP, for ensuring co-ordination between project partners and acceleration of all project activities, monitoring project progress and keeping track of project expenditure etc.

#### AT BLOCK LEVEL:

- ◆ Implementation and monitoring by Block Level Co-ordination Committee headed by a Executive Officer of the Taluk Panchayat.
- ◆ Block Education Officer(BEO), CDPO, Taluk Health Officer, Range Forest Officer, Taluk Horticultural Officer shall assist the EO, TP in implementation of the project at Taluk Level.

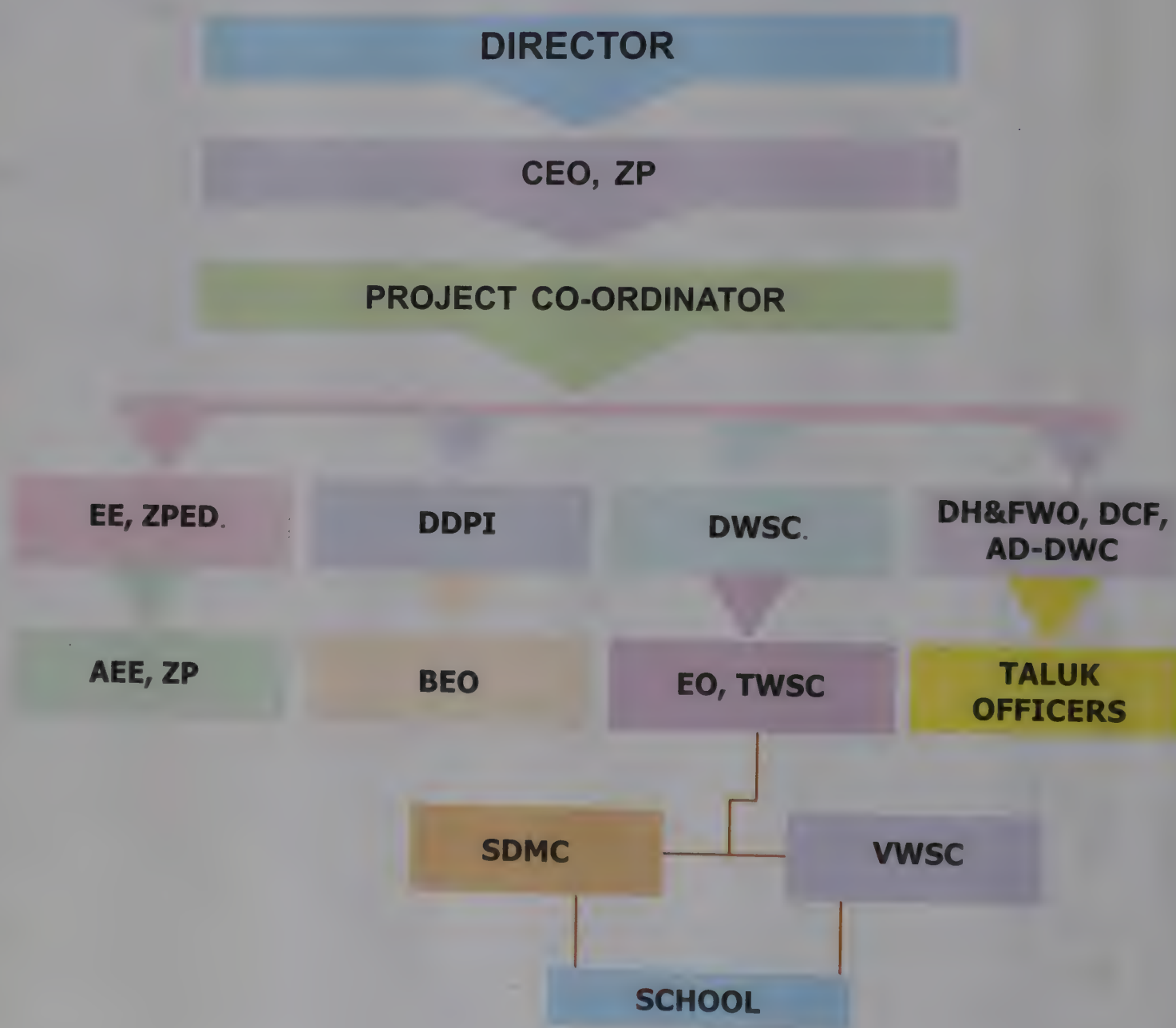
#### AT GRAM PANCHAYAT LEVEL:

- ◆ Gram Panchayat Adyakshas, G P Secretary, Aanganwadi workers, School Headmasters, and ANMs will form the village level core group.
- ◆ School Development & Monitoring Committee.
- ◆ Village Water Supply and Sanitation Committee.





## KARNATAKA RURAL WATER SUPPLY AND SANITATION AGENCY SW & SM







## 7. PROJECT COMPONENTS AND RELEASE OF FUNDS :

SWSM shall release the funds for project implementation to DWSC, which in turn release the money to GP/VWSC/SDMC for the project activities. GoK-KRWSSA provide the project cost, including target communities contribution of 10%. It is agreed that O&M costs will be borne by the schools/communities.

On an average cost of each school sanitation project works out to be as below which includes water supply, sanitation & protection to WatSan facilities.

### HARDWARE :

Water Supply : Drilling + HP	= Rs. 40,000 /- OR
FLHP or Single Phase Pump & Tank	= Rs. 30,000 /-
Extension of PWS (T joint)	= Rs. 18,000 /- (Upper Limit)
Sanitation (Toilets + Urinals) <sup>2</sup> (2 designs)	= Rs. 40,000/- & Rs. 25,000/-
Protection to WatSan facilities (Compound Wall) <sup>3</sup>	= Rs. 50,000 /-

1. Force Lift Hand Pump wherever feasible (shallow depths). Cost includes Drilling, HP installation, Sintex 2, stand, specials (connections), Platform, Pipes, Single Phase Motor etc.,
2. Where the student strength more than 50, design of Rs. 40,000/- may be adopted, less than 50, design of Rs. 25,000 may be adopted.
3. Funds available, over and above to be mobilised by ZP. TP and GP under 11th finance and other funds.
4. Drawings and Estimations are enclosed as Annexures.

### SOFTWARE :

IEC - Community & Social Mobilisation. = Rs 4,000/- per school

### Description of the Components :

The hardware and software components of the project will be:

**Provision of Water Supply :** Priority is to ensure safe source of drinking water. It is not necessarily be - by means of Borewell alone nor by extending pipeline. This may be decided specifically keeping the geographical area of school campus and strength of the school. There has to be fair justification with regard to provision of water supply both in terms of cost and demand.







Schools drilled with borewells are to be fitted with IM III family hand pumps. Force lift hand pump to be installed only on ensuring necessity and students strength. As far as possible extension of Pipe line from the Piped Water Scheme (PWS), is desirable to achieve economic and easy operation and maintenance.

#### (a) Construction of Institutional Toilet

On ensuring water supply, toilet facilities including latrines and urinals will be constructed in the schools based on the norm of 1 toilet block (with separate units for boys and girls) for every unit of 120 students. Teachers can also use the facility but should not lock one exclusively for them. Structures for water storage for washing and hand washing need to be constructed.



#### (b) Protection to SSHE Facilities

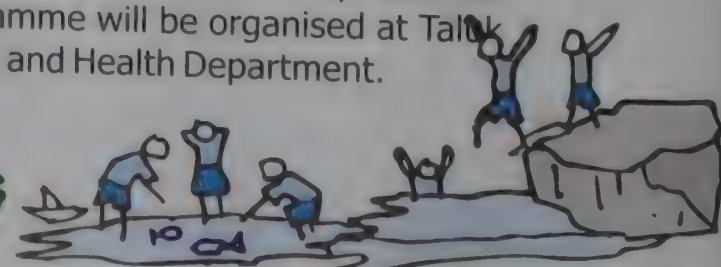
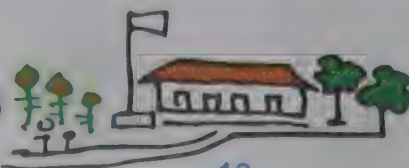
Protection of facilities created under the project from stray dogs, Pigs cattle etc. is very important. Fencing to be put up using eco friendly measures at cost effective options which are made available.



### SOFTWARE :

#### (a) Capacity Building Activities :

- One day orientation of Zilla Panchayat members to the concept of school sanitation and to ensure better co-ordination and support. It is desired to involve SIRD, Mysore - KRWSSA, Unicef and SRC for this Training.
- One day Orientation to Taluk Panchayath Members at the Taluk Level. This Training programme may be organised at SIRD Mysore.
- Orientation of Gram Panchayath Members, VWSC Members and SDMC members, to sensitise and appraise them of their roles as teams of motivators in the dissemination of information at the village level by maintaining a direct contact with the community. Special emphasis will be given to women. This training programme will be organised at Taluk Level with joint collaboration of Education and Health Department.



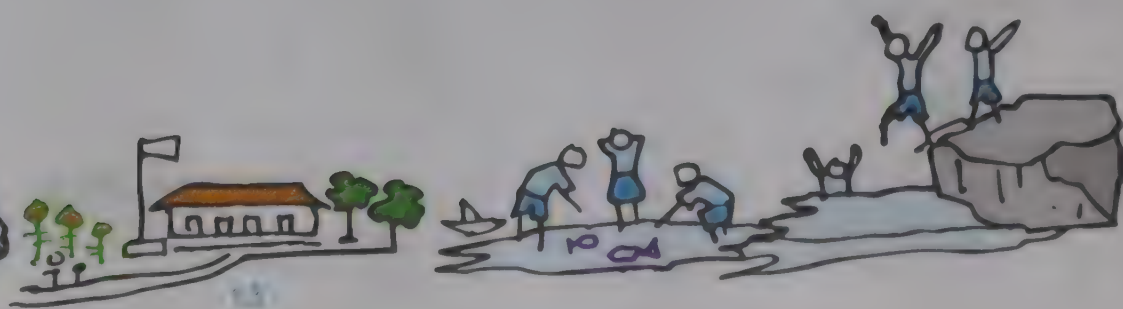
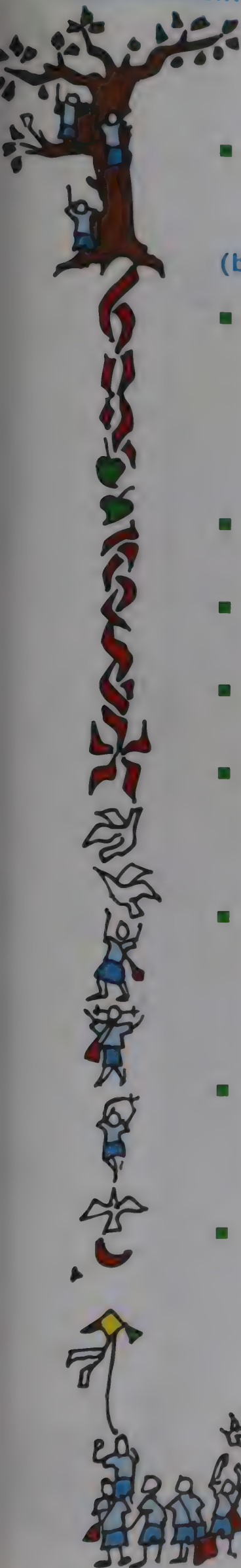




- Orientation of SDMC Members, who will have the final responsibility of maintenance of the SSHE facilities. This training programme will be organised at cluster level with joint collaboration of Education & Health Depts.

**(b) IEC: Information Education Communication ( Behavioural Change):**

- Constitution of "School Cabinets" with a "Council of Ministers", with badges for recognition. Orientation of Cabinet members and assignment of specific responsibilities to ministers. Consumable items for maintenance of assets created under the project will be replaced by school cabinet via student contribution. Cabinet members are to be given orientation at cluster level by the teachers trained on school sanitation inputs.
- Wall paintings and pictorials relating to sanitation and hygiene, posters as information centres
- Audio-visuals including video shows on SSHE at schools - are to be taken up jointly by Health & Education dept to be liaised with Project Co-ordinator.
- Village immersion programme organised by key field functionaries and the community together sharing of SSHE and WatSan issues on larger platform.
- Inter-personal communication approaches where teachers visit each household and interact with villagers and share WatSan messages and discuss issues. This event will be organized at the village level by the teachers of respective schools.
- Jathas by school children with SSHE/WatSan messages on days of national importance followed by shramdhan in cleaning school premises and village surroundings. This event will be organised by the head master of respective schools monitored by CRC and BRC at the block level with the involvement of NGO's.
- Awareness camps on SSHE, WatSan to sustain impact of interpersonal communication; demonstrations, dissemination through exhibitions, magic shows, street plays, puppet shows and other traditional art forms. This event will be done with the coordination of education, health, and local NGO's
- School Cabinet Summit to enable children from different schools to meet on a common platform to share their experiences and new developments as "Ministers" -- this will ensure that innovative ideas are shared and replicated.







## 8. BUDGET

The District committee should prepare a detailed budget in the following format.

Sl. No.	ACTIVITY	AGENCY RESPONSIBLE	QUANTITY & UNIT COST	TOTAL COST	
				2003	2004
<b>I</b>	<b>School Infrastructure :</b>				
1	FLHPs + Riser Pipes				
2	Installation of FLHPs incl. Drilling, erection PF, etc.				
3	Installation of O/H tank + structure & distribution lines				
4	Extension of PWS in Schools (labour)				
5	20 mm NB GI Pipes, (6 lengths each of 6m /school)				
6	Institutional - (School) toilets				
7	Protection to Wat San fac. in Schools				
8	Rain Water harvesting in Schools				
	<b>Sub Total</b>				
<b>II</b>	<b>IEC</b>				
1	Orientation of School Teachers at Rs. 300/person/day. Batch 40 - 3days trg. Orientation of PRI members				
2	Orientation of School Children				
3	Orientation of school cabinet members @Rs. 50/member 60 batches each batch - 50 members				
4	Erection of Hoardings				
5	Wall writings on School Sanitation				
6	Child friendly activities				
7	Jathas by School Children				
8	Best School awards to schools				
9	Badges to School cabinet members				
10	IEC Drive through sports/street plays				
11	Exchange visits				
	<b>Sub Total</b>				
<b>III</b>	<b>Project Management</b>				
1	PCO's salary/operating expenses				
2	Project Management support				
3	Contingency				
4	Baseline study by third party				
5	Impact evaluation study				
	<b>Sub Total</b>				
	<b>Grand Total</b>				





## 9. Do's and Dont's :

✓ Do's	✗ Don't's
Educate children to keep School premises clean & tidy	Children shall not be allowed to litter in the premises.
Gates ensured with lock & key arrangements during non schooling hours	Children shall not be allowed to play on the gates.
SDMCs / Teachers to emphasise more on growing nutritional plants	Planting of deep rooting trees all along the periphery to be avoided and a minimum distance of 3 Mtrs from the boundary line to be practiced.
Every school shall evolve a perspective plans with respect to greening of schools in particular medicinal plants	Discourage use of chemical fertilizers.
Ensure taps are kept closed during non supply hours	Avoid running / leaky taps
Ensure water source platform are kept clean	Stagnation has to be avoided near water sources
Dis-infection of water sources to be done periodically	Care to be taken to avoid of ingress of polluted water.
WC pans should be of ceramic which consumes less water for flushing (Rural pans)	Avoid use of regular pans-used in cities.
Ensure proper gradients for smooth disposal of faeces soil	Avoid using of less diameter pipes for disposal which results in clogging of toilets.
Use one faeces soak pit to dispose faeces.	Do not use both the soak pits simultaneously
Wet the Pan before using Toilet	Avoid running water in the toilet
Periodically check the inspection chamber of the latrine unit and Urinal drains are to be cleaned everyday	Avoid falling of dry leaves on the drain
Promote use of Ferro cement / RCC roofing for toilets.	Avoid AC sheet roofing .
SDMC/Teachers/Children shall mobilize corpus funds for O & M	Contribution shall be of voluntary and not by compelling.
School surroundings shall also look clean and green	Avoid stagnation of water around the school premises





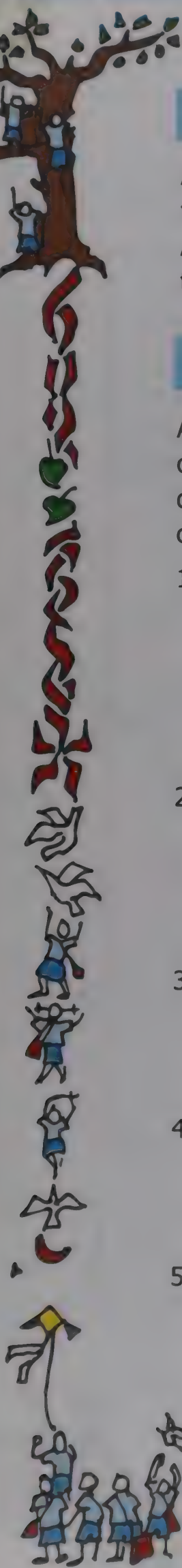
## 10. QUALITY ASSURANCE & INSPECTION.

An internal system of quality control to enable district level stakeholders to ensure quality of Wat San facilities in schools and record keeping. A strong monitoring mechanism for the hardware components through a system of third party Quality Assurance & Inspection.

## 11. MONITORING :

A system of Monitoring Charts will be introduced for children to keep track of school sanitation and health issues. The charts will be used both as a database as well as an educational tool to encourage discussion and correction.

1. The Health Chart: This depicts common ailments in children (cold, cough, tonsillitis, diarrhoea, fever, vomiting, scabies, measles, etc) arranged in a grid along with months. Teachers elicit information about children who have suffered from a particular ailment on the chart once a month. This will serve both as a database for occurrence of ailments and its relation in particular season.
2. The Body check-up Chart: Once a month, older children will set up clinics where each child is examined for cleanliness of skin, teeth, eyes, nose, and ears. The number of children who do not pass the test will be noted in the chart and class monitors will make special efforts to support these children to maintain good personal hygiene.
3. Facility Maintenance Chart: The facilities (including the school compound, toilets, and classrooms) are shown in a chart along with the Sanitation Index. The chart is filled each day by the Cabinet Members and is reviewed at the Cabinet meetings.
4. Defecation Habits: A chart depicting children defecating in various places - road, near the village pond, field, outside homes, toilets, etc. this is filled in once a month by the teacher after asking questions like "who have you seen defecating in the field over the last month", etc.
5. Bathing and Washing Habits: The teacher fills a chart depicting bathing places once a month after asking children where they bathe, whether they wash their hands with soap after defecating and before eating food.







## 12. MONITORING INDICATORS

SI No.	Indicator	at START ( 2004 )	After 12 months
<b>FACILITIES</b>			
1	% of project schools having proper Toilet and Urinal facilities, for both Boys and Girls;		
2	% of project schools having a proper and safe Drinking Water Supply facility, including O/H storage;		
3	% attendance in project school, during the month of June		
4	% of project schools having a 'Boundary Wall		
5	% of project school having a proper Hand-washing facility		
6	% age of project schools having a proper Waste Water Drainage facility		
7	% of project schools having neat and clean Classrooms;		
8	% of project schools having a beautiful Garden, compound/environment, with flowers, fruit trees;		
<b>USE AND MAINTENANCE</b>			
9	% of Households use Toilets at Home		
10	% of Households that use safe Drinking Water		
11	% of Boys who use the Toilets/Urinals in the project school		
12	% of Girls who use the Toilets/Urinals in the project school		
13	% of children who wash their hands properly ( with Soap) at right times;		
14	% of Teachers who wash their hands properly ( with Soap) at right times;		
15	% age of project schools where Teachers and Children work together to keep school premises neat and clean		
16	% of schools having Operation and Maintenance fund (with proper bank account )		
<b>COMMUNICATION AND EDUCATION</b>			
17	% of project schools in which classroom education takes place on hygiene and sanitation		
18	% of project schools where "Life-Skills" is taught;		
19	% of project schools where Children 'participate' in school activities (school cabinets)		
20	% Enrolment		
21	% Attendance		
22	% Dropout		
<b>TRAINING</b>			
23	% of Headmasters trained on SSHE		
24	% of Teachers trained on SSHE		
25	% of SDMC members trained on SSHE		





### 13. INTERNAL REVIEW MEETINGS

In order to assess the progress of activities cluster resource persons by holding discussions with the concerned school every month which will be forwarded to the Block Education Officer. The progress reports will be prepared every month and forwarded to the concerned district level officials for follow-up action. The concerned line departments will present their views during district level co-ordination committee meetings.

### 14. EVALUATION

**A District Level Co-ordination Committee (DLCC),:** Committee comprising officers from Health, Education, ICDS, and other related departments will be constituted under the Chairmanship of the Chief Executive Officer, Zilla Panchayat, which will review the progress quarterly.

**A Block Level Co-ordination Committee (BLCC) :** Committee comprising taluk level officers of ICDS, Health, Education, PRED/RWS, and other departments will be formed under the Chairmanship of Executive Officer Taluk panchayat with local NGOs as coopted members. The progress under this project will be reviewed once in every month during the monthly meeting of KDP at taluk level.

Further, the Block Education Officer will lead all the training programmes for the Teachers and Village Education Committee Members with the involvement of **BRC and CRC 's of Education Dept.** The views of the members of the BLCC will be reflected through the **Executive Officer**, who is a member of the **DLCC**, which is the apex body. This apex body will take stock of the overall implementation of the project.

Also, in order to assess the progress of activities, cluster resource persons will hold discussions with each school every month. This will be recorded and sent to the Block Education Officer who in turn will forward follow-up plans to the concerned district level officers. The concerned officers will present their views during the quarterly **DLCC** meetings.





It is intended to have an independent evaluation of the programme in the Districts by an external agency. (Third party evaluation- in the district to evaluate the implementation of this strategy.) The findings of this evaluation will facilitate the district administration to take corrective measures for the proper and smooth implementation of the School Sanitation Project. Similarly concurrent evaluation will be conducted during the implementation of the project and mid course corrections taken in consultation with KRWSSA.





**Detailed Estimate for Construction of Institutional Toilet Unit  
Under School Sanitation Project for unit cost 25,000/-**

Sl. No.	Description of Work	Unit	No.	L	B	D/H	Qty.	Rate	Amount	Actual Rate	Rate	Area Weightage
1	Earth Work Excavation for for Foundation & removing the excavated earth to a distance not exceeding 50 Mtr. & with a Lift upto 1.5 Mtr. In Ordinary Soil	Cu.m	1	13.100	0.300	0.560	2.201	37.08	81.61	37.08	36.00	0.03
2	Providing & Laying Granite or Basalt or Trap Jelly Concrete using 40 mm down size jelly for Foundation laid in 10 cms. Thick layer & Compacted including Curing etc., complete Using C.C 1:5:10 Prop	Cu.m	1	13.100	0.300	0.100	0.393	1236.00	485.75	1236	1200.00	0.03
3	Providing & Constructing Brick Masonry with Approved Quality of Modular Bricks of standard size with necessary curing & scaffolding for Basement in C.M 1:6	Cu.m	1	13.10	0.19	0.46	1.145	1236.00	1415.15	1236	1200.00	0.03
4	Earth Work Filling to the Foundation & Basement with the available earth, including Watering & Compaction layers of 15 cms. Thick, upto 50 mtr, lead											
	In Urinals	Cu.m	2	1.50	1.20	0.23	0.414					
	In W.C	Cu.m	1	0.90	1.20	0.23	0.248					
	<b>Total Qty</b>	Cu.m					0.662	25.75	17.06	25.75	25.00	0.03
5	Providing & Constructing Brick Masonry Partion Walls mild steel reinforcement two rows of 6 mm dia., for every third course & distribution at 30 cms. c/c with Ordinary Modular Bricks of standard size with C.M 1:4 with necessary scaffolding & curing for Super Structure											
a.	All Round Wall 1.50 Mtr. Height	Sq.m	1	13.10		1.50	19.650					
b.	Extra Wall above 1.50 Mtr. Height	Sq.m	1	3.33		0.50	1.665					
c.	Extra Wall Between the W.C	Sq.m	2	1.20		0.40	0.960					
d.	Extra wall at urinals entrance	Sq.m	2	0.23		1.50	0.690					
e.	Step at entrance of Urinals	Sq.m	2	0.75		0.23	0.345					
f.	Deduction for Doors	Sq.m	2	0.60		1.80	2.160					
g.	Deduction for Ventilators	Sq.m	1	0.30		0.30	0.090					
h.	Deduction for Opening in Urinals	Sq.m	2	0.75		1.50	2.250					
	<b>Net Qty</b>						21.060	180.25	3796.07	180.25	175.00	0.03
6	Providing C.M 1:6 Plastering to B.B.M including Providing removing Scaffolding Rounding of all corners wherever required, smooth rendering curing etc., complete											
a.	All Round Wall 1.50 Mtr. Height	Sq.m	2	17.63		1.50	52.890					
b.	Extra Wall above 1.50 Mtr. Height	Sq.m	2	3.33		0.50	3.330					
c.	Extra Wall Between the W.C	Sq.m	4	1.20		0.40	1.920					
d.	Extra wall at urinals entrance	Sq.m	2	0.46		1.50	1.380					
e.	Step at entrance of Urinals	Sq.m	2	1.00		0.25	0.500					
f.	Basement Out side Faces	Sq.m	1	13.10		0.23	3.013					
g.	Deduction for Doors	Sq.m	2	0.60		1.80	2.160					
h.	Deduction for Ventilators	Sq.m	1	0.30		0.30	0.090					
i.	Deduction for Opening in Urinals	Sq.m	2	0.75		1.50	2.250					
	<b>Net Qty</b>						58.533	41.20	2411.56	41.2	40.00	0.03
7	Providing & fixing M.S Glazed Ventilators as Per approved Drawing, fixed with C.C 1:3:6 WITH 12 MM Squire Guard bars Straight	Sq.m	1	0.30		0.11	0.033	1236.00	40.79	1236	1200.00	0.03
8	Supplying and providing ferrocement roofing using welded and chicken mesh with 1:3 cement mortar including form work, curing to required finish (as per market rate)	Sq.m	2	2.13	1.50		6.390	400.00	2556.00	0	400.00	
9	Supplying & Fixing Steel Door made out of pressed steel 110 mm x 65 mm of 18 Guage frame & Shutters made out of 25 mm x 25 mm x 6 mm M.S Angle with 75 mm C.R Plain panels welded to Shutters frame embedded in C.C 1:3:6	Sq.m	1	0.60		1.50	0.9	1854.00	1668.60	1854	1800.00	0.03
10	Supplying & Fixing Steel Grill Door made out of pressed steel 110 mm x 85 mm of 18 Guage frame & Grills made out of 12mm Square Bars welded to frame embedded in C.C 1:3:6 with 2 Coats of Paint & Primer ( As per Market Rate )	Sq m	2	0.75		1.50	2.25	450.00	1012.50	450	450.00	



11	Providing & Constructing R.C.C 1:2:4 Lintels laid 15 cms. thick around the Building Including the Cost of Steel & Fabrication Charges i.e Rs. 50/-													
a.	Over Doors - d	Cu m	2	0.80	0.11	0.15	0.026		50.00					
b.	Over Ventilators	Cu m	1	0.50	0.11	0.15	0.008							
	Total Qty	Cu m					0.035	2575.00	89.22	2575	2500.00	0.03		
12	Providing 2 Coats of Water Proof Cement Painting over one Coat of Primer to inside & outside Walls (Approved Brand Paint) Double Coat, without Primer Qty same as Plastering Qty.	Sq.m					58.533	20.60	1205.78	20.6	20.00	0.03		
13	Flooring with 4 cms thick CC 1:2:4, over a bed of 10 cms. thick CC 1:4:8 with Red Oxide finish, laid to Proper Slope & Polished with cardinal Polish or any other type Wax Polish including Curing etc., complete													
a.	For Urinals	Sq.m	2	1.50	1.20		3.6							
b.	For W.C	Sq.m	1	0.90	1.20		1.08							
	Total Qty	Sq.m					4.68	257.50	1205.10	257.5	250.00	0.03		
14	Providing & Laying White Vitreous China Clay Indian Type Water Closet flush Type of approved make with 'P' or 'S' Trap, a pair of White Glazed foot rest etc, complete as per directions - 450 mm Size A Grade	No.	1				1	550.00	550.00	550	550.00			
15	Providing GRP Unbreakable Suatting Pan available in a wide range of attractive colours as per I.S.11246:1992 and confirming to RV - TIFAC composite design centre Specification 0.75 Kg	No.	2				2	160.00	320.00	160	160.00			
16	Providing & Constructing 230 mm thick BBM in CM 1:6 Wall for Boy's Urinals & Top Surface in Sloped to the required gradient	Cu.m	1	1.50	0.23	0.45	0.155	1236.00	191.89	1236	1200.00	0.03		
17	Providing C.M 1:6 Plastering to B.B.M including Providing removing Scaffolding Rounding of all corners for Urinals gutter wherever required, smooth rendering curing etc., complete	Sq.m	2	1.50		1.20	3.600	41.20	148.32	41.2	40.00	0.03		
18	Earth filling for levelling of ground for construction of Water Tank	Cu.m	1	1.00	1.00	0.23	0.230	25.75	5.92	25.75	25.00	0.03		
19	Providing & Laying Granite or Basalt or Trap Jelly C.C 1:2:4 Proportion Cement Concrete for beds of Water Tanks using 20 mm down size jelly including Laying, Tamping, Providing, Mixing 1 Kg. of WPC for Every one Bag of Cement for top Plaster Finish in CM 1:3 including Curing etc., complete	Cu.m	1	1.20	1.20	0.10	0.144	1800.00	259.20	1800	1800.00			
20	Providing & Constructing Brick Masonry with Approved Quality of Modular Bricks of standard size with necessary scaffolding & curing in C.M 1:6 for Water storage tank	Cu.m	1	3.08	0.23	0.60	0.425	1236.00	525.35	1236	1200.00	0.03		
21	Providing C.M 1:6 Plastering to B.B.M including Providing removing Scaffolding Rounding of all corners wherever required, smooth rendering curing etc., complete													
a.	Outsides Exposed 3 Faces	Sq.m	1	3.60		0.83	2.988							
b.	Inside all round	Sq.m	4	0.77		0.60	1.848							
	Total Qty						4.836	41.20	199.24	41.2	40.00	0.03		
22	Providing & Fixing 25 mm dia. G.I. Tap with Necessary fittings including cost fittings	No.	2				2	125.00	250.00	125.00	125.00			
II	Inspection Chamber & Soak Pit													
23	Constructing inspection chambers 45cms x 45 cms (interior clear dimension with burnt brick in CM 1:6, 23 cms thick on a bed of 15.24 cms thick c.c 1:3:6 and CM 1:4 plastered for sidewalls including fixing 45 cms x 45 cms C.I. Frame and cover in c.c 1:2:4, 7.5 cms thick and other specifications upto 0.6 depth (excluding cost of C.I. framed and cover).	Nos.	1					660.00	660.00		660			
24	Providing C.I. Frames with cover of size 45 cm x 45 cm including cost & conveyance of all materials.	Nos.	1					500.00	500.00	500	500			
25	Providing stone ware Gully Trap 15 cm x 10 cm size of approved quality and make and fixing in C.C.1:2:4 and plastering with C.M. 1:3 wherever necessary.	Nos.	2					145.00	290.00		145			
26	Earth work excavation for Leach pit	Cu.m	2	0.785	1.44	1.125	2.543	41.20	104.79	41.2	40	0.03		

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27	Refilling of leach pit with Brickbats Between excavated face & Wall	Cu.m	2	3.142	1.16	1.275	9.294	41.20	382.91	41.2	40	0.03	
28	Providing & Construction of B.B.M. 110mm Wall with modular bricks in C.M 1:4 Circumferential Below the Steaning Wall	Sq.m	2	3.142	1.01	0.22	1.396	185.40	258.87	185.4	180	0.03	
29	Providing & Construction of B.B.M. 110mm thick Honey Coumbed Partition Wall with modular bricks as per the Design & drawing (Below Inlet S.W. Pipe)	Sq.m	2	3.142	1.01	0.60	3.808	154.50	588.35	154.5	150	0.03	
30	Providing & Construction of B.B.M. 110mm Wall with modular bricks in C.M 1:4 Circumferential (Above the inlet S.W. Pipe)	Sq.m	2	3.142	1.01	0.38	2.412	221.45	534.09	221.45	215	0.03	
31	Providing C.M 1:6 Plastering to B.B.M including Providing removing Scaffolding Rounding of all corners wherever required, smooth rendering curing etc., complete	Sq.m	2	3.142	0.90	0.60	3.393	41.20	139.81	41.2	40	0.03	
32	Providing & Fixing of 7.5 cms. Thick (R.C.C 1:2:4) Cover Slab over the Leach Pit (cost of reinforcement, Fabrication charges) C.C 1:2:4 Only	Sq.m	2	0.785	1.10		1.731	100.00	200.00			1.05	1.05
			2					257.50	445.71	257.5	250	0.03	1.1025
33	Earth work excavation for laying Glazed Stone ware pipes	Cu.m	2	1.00	0.30	0.60	0.36	46.35	16.69	46.35	45	0.03	34
	Refilling of pipe line trenches with selected earth, including watering, consolidation in layers of 15 cm. Thick	Cu.m	2	1.00	0.30	0.60	0.36	22.66	8.16	22.66	22	0.03	
35	Providing & Laying Glazed stone ware pipes of approved make, 1st quality, aligning to proper slope joining with hemp & caulk, plastering with 1:1 1/2 C.M & testing with water ( 100 mm dia Pipe)	R.M	1	2.45			2.45	70.00	171.50	70	70	3.1428	
												571	22 7
36	Providing & Laying Glazed stone ware pipes Junction of approved make, 1st quality, aligning to proper slope joining with hemp & caulk, plastering with 1:1 1/2 C.M & testing with water ( 100 mm dia x 100 mm dia)	Nos.	1				1.00	120.00	120.00	120	120	0.785714	
37	Providing , Laying & Jointing 75 mm Dia. P.V.C(Oriplast) Pipes conforming to I.S. 4085-1960 & 7634-1975 Specification with necessary specials such as Collars, Bends, Elbows, Tees, Nipples, Plugs with cuts & threads Jointing ring with solution wherever necessary as per directions -												
	From Inspection Chamber as Air vent pipe	R.M	1	3.00			3.00	63.00	189.00	63	63.00		
	From Urinals to Inspection Chamber	R.M	2	1.50			3.00	63.00	189.00	63	63.00		
38	Providing 10cm. Dia A.C. Cowl WITH Cap of approved quality & make & fixing in position (0.45+1.00+1.00)	No.	1				1	41.00	41.00	41	41		
39	Flooring Allround Outside except backside with 10 cms thick B.S. Slab over a bed of 7.50 to 8.00 cms. Thick, fixing & pointing in C.M 1:3 with finish, laid to Proper Slope, including Curing etc., complete-	Sq.m	1	13.25	0.75		9.9375	164.8	1637.70	164.8	160	0.03	
	Grand Total Rs.								24962.68				



**Detailed Estimate for Construction of Institutional Toilet Unit Under School Sanitation  
Project FOR UNIT COST OF Rs 40,000/-**

Sl. No.	Description of Work	Unit	No.	L	B	D/H	Qty.	Rate	Amount	Actual Rate	Rate	Area Weightage
1	Earth Work Excavation for for Foundation & removing the excavated earth to a distance not exceeding 50 Mtr. & with a Lift upto 1.5 Mtr. In Ordinary Soil	Cu.m	1	15.900	0.300	0.560	2.671	37.08	99.05	37.08	36.00	0.03
2	Providing & Laying Granite or Basalt or Trap Jelly Concrete using 40 mm down size jelly for Foundation laid in 10 cms. Thick layer & Compacted including Curing etc., complete Using C.C 1:5:10 Prop	Cu.m	1	15.900	0.300	0.100	0.477	1236.00	589.57	1236	1200.00	0.03
3	Providing & Constructing Brick Masonry with Approved Quality of Modular Bricks of standard size with necessary curing & scaffolding for Basement in C.M 1:6	Cu.m	1	15.90	0.19	0.46	1.390	1452.30	2018.20	1452.3	1410.00	0.03
4	Earth Work Filling to the Foundation & Basement with the available earth, including Watering & Compaction layers of 15 cms. Thick, upto 50 mtr, lead											
	In Urinals	Cu.m	2	2.25	1.20	0.23	0.621					
	In W.C	Cu.m	2	0.90	1.20	0.23	0.248					
	<b>Total Qty</b>	Cu.m					<b>0.869</b>	<b>25.75</b>	<b>22.39</b>	<b>25.75</b>	<b>25.00</b>	<b>0.03</b>
5	Providing & Constructing Brick Masonry Partion Walls mild steel reinforcement two rows of 6 mm dia., for every third course & distribution at 30 cms. c/c with Ordinary Modular Bricks of standard size with C.M 1:4 with necessary scaffolding & curing for Super Structure											
a.	All Round Wall 1.50 Mtr. Height	Sq.m	1	15.90		1.50	23.850					
b.	Extra Wall above 1.50 Mtr. Height	Sq.m	1	3.33		0.50	1.665					
c.	Extra Wall Between the W.C	Sq.m	3	1.20		0.40	1.440					
d.	Extra wall at urinals entrance	Sq.m	2	0.23		1.50	0.690					
e.	Step at entrance of Urinals	Sq.m	2	0.75		0.23	0.345					
f.	Deduction for Doors	Sq.m	2	0.60		1.80	2.160					
g.	Deduction for Ventilators	Sq.m	2	0.30		0.30	0.180					
h.	Deduction for Opening in Urinals	Sq.m	2	0.75		1.50	2.250					
	<b>Net Qty</b>						<b>25.650</b>	<b>221.45</b>	<b>5680.19</b>	<b>221.45</b>	<b>215.00</b>	<b>0.03</b>
6	Providing C.M 1:6 Plastering to B.B.M including Providing removing Scaffolding Rounding of all corners wherever required, smooth rendering curing etc., complete											
a.	All Round Wall 1.50 Mtr. Height	Sq.m	2	17.63		1.50	52.890					
b.	Extra Wall above 1.50 Mtr. Height	Sq.m	2	3.33		0.50	3.330					
c.	Extra Wall Between the W.C	Sq.m	6	1.20		0.40	2.880					
d.	Extra wall at urinals entrance	Sq.m	2	0.46		1.50	1.380					
e.	Step at entrance of Urinals	Sq.m	2	1.00		0.25	0.500					
f.	Basement Out side Faces	Sq.m	1	13.10		0.23	3.013					
g.	Deduction for Doors	Sq.m	2	0.60		1.80	2.160					
h.	Deduction for Ventilators	Sq.m	2	0.30		0.30	0.180					
i.	Deduction for Opening in Urinals	Sq.m	2	0.75		1.50	2.250					
	<b>Net Qty</b>						<b>59.403</b>	<b>41.20</b>	<b>2447.40</b>	<b>41.2</b>	<b>40.00</b>	<b>0.03</b>
7	Providing & fixing M.S Glazed Ventilators as Per approved Drawing, fixed with C.C 1:3:6 WITH 12 MM Squire Guard bars Straight	Sq.m	2	0.30		0.11	0.066	1442.00	95.17	1442	1400.00	0.03
8	Supplying and providing ferrocement roofing using welded and chicken mesh with 1:3 cement mortar including form work, curing to required finish (as per market rate)	Sq.m	2	2.13	1.80		7.668	484.00	3711.31	484	484.00	
9	Supplying & Fixing Steel Door made out of pressed steel 110 mm x 65 mm of 18 Gauge frame & Shutters made out of 25 mm x 25 mm x 6 mm M.S Angle with 75 mm C.R Plain panels welded to Shutters frame embedded in C.C 1:3:6	Sq.m	2	0.60		1.50	1.8	1854.00	3337.20	1854	1800.00	0.03
10	Supplying & Fixing Steel Grill Door made out of pressed steel 110 mm x 65 mm of 18 Gauge frame & Grills made out of 12mm Square Bars welded to frame embedded in C.C 1:3:6 with 2 Coats of Paint & Primer ( As per Market Rate )	Sq.m	2	0.75		1.50	2.25	600.00	1350.00	600	600.00	



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23	Constructing inspection chambers 45cms x 45 cms (interior clear dimension with burnt brick in CM 1:6, 23 cms thick on a bed of 15.24 cms thick c.c 1:3:6 and CM 1:4 plastered for sidewalls including fixing 45 cms x 45 cms C.I. Frame and cover in c.c 1:2:4, 7.5 cms thick and other specifications upto 0.6 depth (excluding cost of C.I. framed and cover).	Nos.	1						660.00	660.00		660	
24	Providing C.I. Frames with cover of size 45 cm x 45 cm including cost & conveyance of all materials.	Nos.	1										
25	Providing stone ware Gully Trap 15 cm x 10 cm size of approved quality and make and fixing in C.C.1:2:4 and plastering with C.M. 1:3 wherever necessary.	Nos.	2						500.00	500.00	500	500	
26	Earth work excavation for Leach pit	Cu.m	2	0.785	1.44	1.125	2.543	49.44	125.75	49.44	48	154	0.03
27	Refilling of leach pit with Brickbats Between excavated face & Wall	Cu.m	2	3.142	1.16	1.275	9.294	51.50	478.64	51.5	50		0.03
28	Providing & Construction of B.B.M. 110mm Wall with modular bricks in C.M 1:4 Circumferential Below the Steaning Wall	Sq.m	2	3.142	1.01	0.22	1.396	221.45	309.21	221.45	215		0.03
29	Providing & Construction of B.B.M. 110mm thick Honey Combed Partition Wall with modular bricks as per the Design & drawing (Below Inlet S.W. Pipe)	Sq.m	2	3.142	1.01	0.60	3.808	154.50	588.35	154.5	150		0.03
30	Providing & Construction of B.B.M. 110mm Wall with modular bricks in C.M 1:4 Circumferential (Above the inlet S.W. Pipe)	Sq.m	2	3.142	1.01	0.38	2.412	221.45	534.09	221.45	215		0.03
31	Providing C.M 1:6 Plastering to B.B.M including Providing removing Scaffolding Rounding of all corners wherever required, smooth rendering curing etc., complete	Sq.m	2	3.142	0.90	0.60	3.393	41.20	139.81	41.2	40		0.03
32	Providing & Fixing of 7.5 cms. Thick (R.C.C 1:2:4) Cover Slab over the Leach Pit (cost of reinforcement, Fabrication charges)		2					100.00	200.00				
	C.C 1:2:4 Only	Sq.m	2	0.785	1.10		1.727	283.25	489.17	283.25	275		0.03
33	Earth work excavation for laying Glazed Stone ware pipes	Cu.m	2	1.00	0.30	0.60	0.36	46.35	16.69	46.35	45		0.03
34	Refilling of pipe line trenches with selected earth, including watering, consolidation in layers of 15 cm. Thick	Cu.m	2	1.00	0.30	0.60	0.36	22.66	8.16	22.66	22		0.03
35	Providing & Laying Glazed stone ware pipes of approved make, 1st quality, aligning to proper slope joining with hemp & caulk, plastering with 1:1 1/2 C.M & testing with water ( 100 mm dia Pipe)	R.M	1	2.45			2.45	76.00	186.20	76	76		3.1428571
36	Providing & Laying Glazed stone ware pipes Junction of approved make, 1st quality, aligning to proper slope joining with hemp & caulk, plastering with 1:1 1/2 C.M & testing with water ( 100 mm dia x 100 mm dia)	Nos.	1				1.00	120.00	120.00	120	120		
37	Providing , Laying & Jointing 75 mm Dia. P.V.C(Oriplast) Pipes confirming to I.S. 4085-1960 & 7634-1975 Specification with necessary specials such as Collars, Bends, Elbows, Tees, Nipples, Plugs with cuts & threads Jointing ring with solution wherever necessary as per directions - From Inspection Chamber as Air vent pipe	R.M	1	3.00			3.00	63.00	189.00	63	63.00		
	From Urinals to Inspection Chamber	R.M	2	1.50			3.00	63.00	189.00	63	63.00		
38	Providing 10cm. Dia A.C. Cowl WITH Cap of approved quality & make & fixing in position (0.45+1.00+1.00)	No.	1				1	41.00	41.00	41	41		
39	Flooring Allround Outside except backside with 10 cms thick B.S. Slab over a bed of 7.50 to 8.00 cms. thick, fixing & pointing in C.M 1:3 with finish, laid to Proper Slope, including Curing etc., complete-	Sq.m	1	14.75	0.75		11.0625	267.8	2962.54	267.8	260		0.03
40	Supplying and fixing washbasins with accessories and mirrors of approved quality	LS	2					800	1600.00				
	Grand Total Rs.								39745.85				

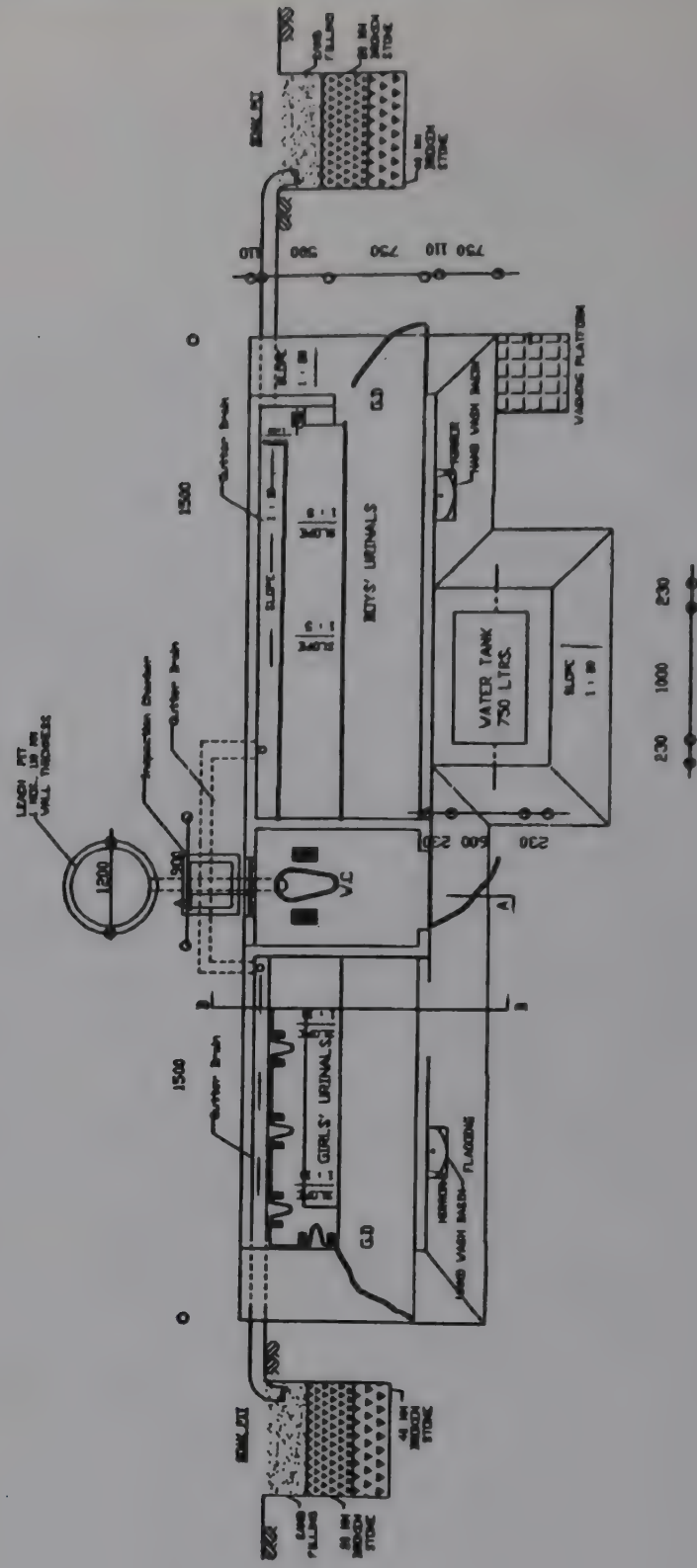
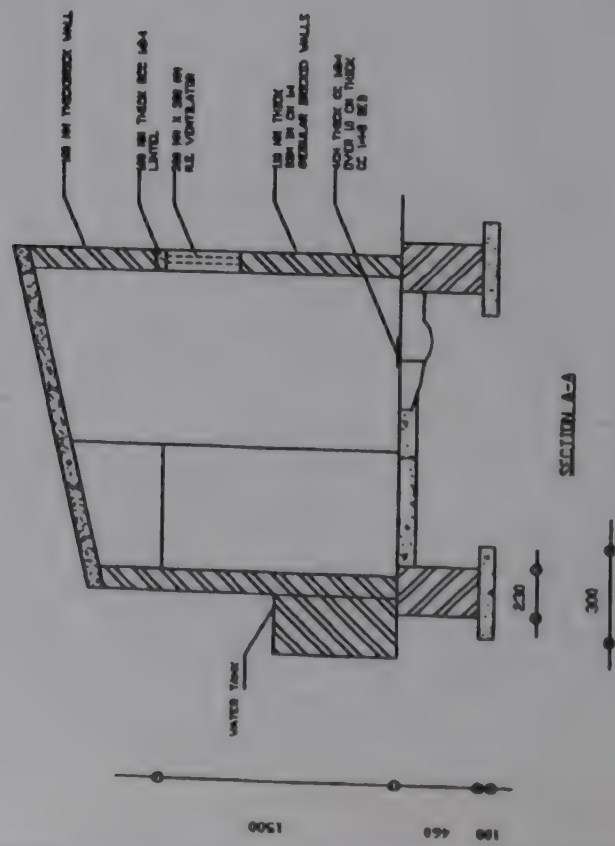
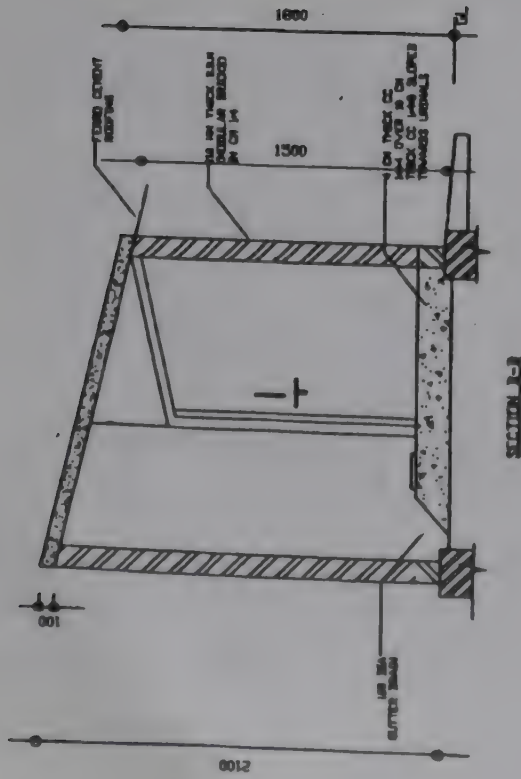


# INSTITUTIONAL TOILET UNDER SCHOOL SANITATION PROJECT

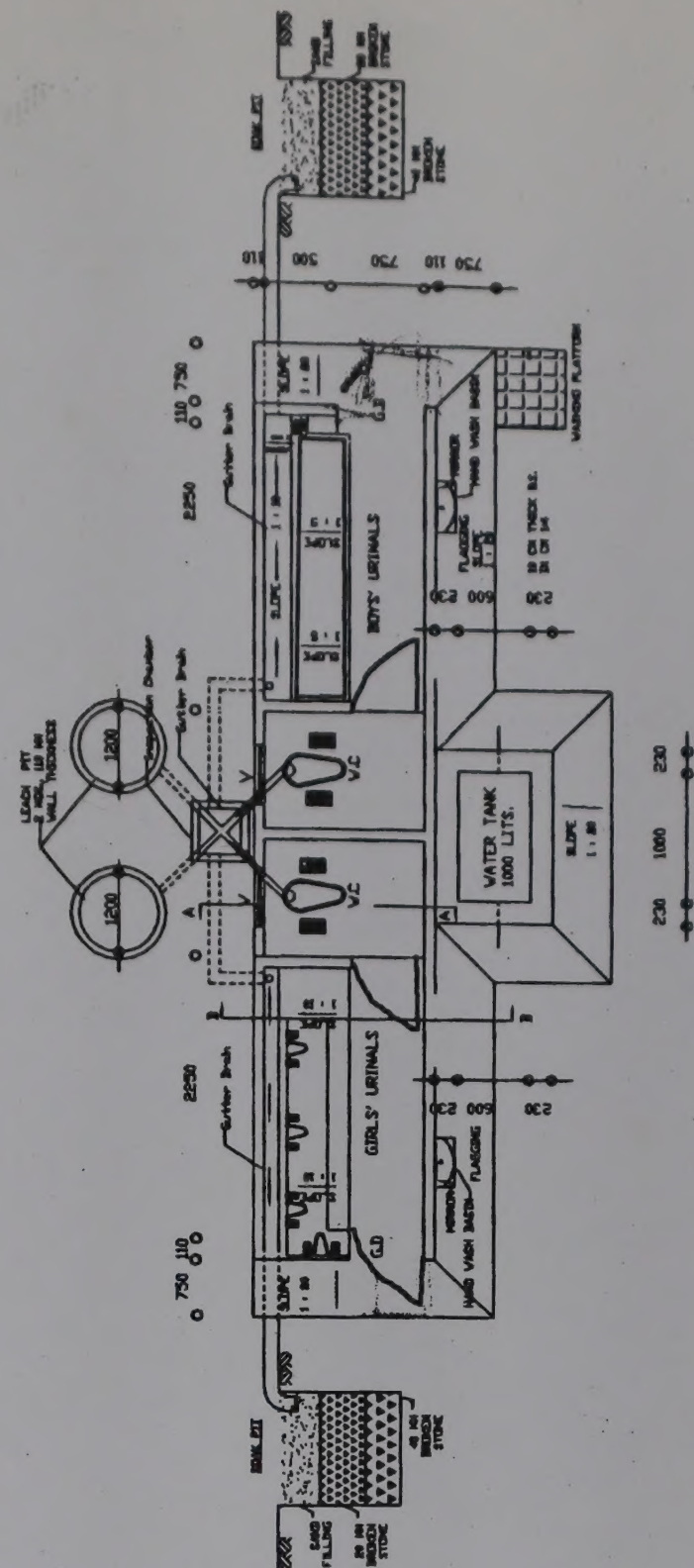
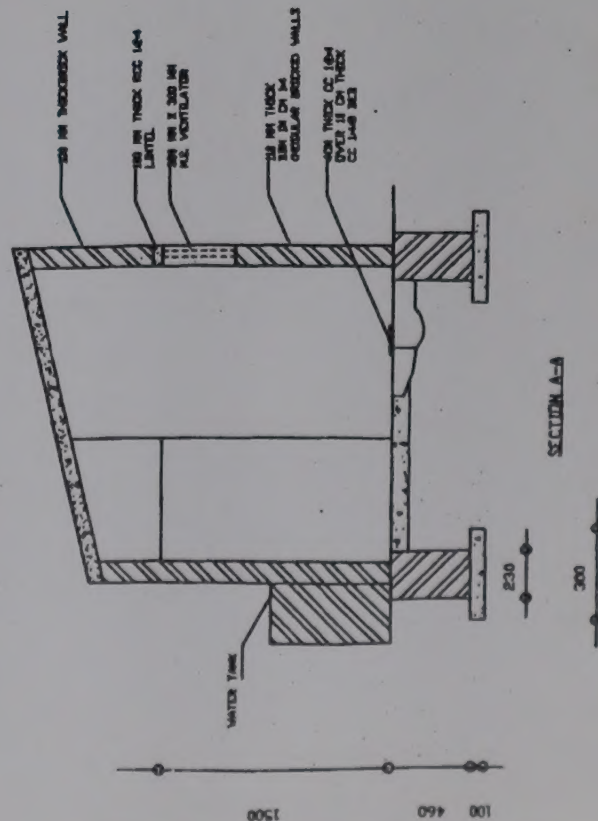
KRWSSA

UNIT COST - Rs. 25,000/-

JAL NIRMAL PROJECT







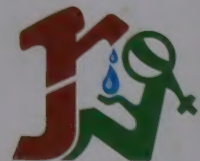












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